Bringing Technology into the Classroom through BYOD

Statement of the Leadership Project Proposal

The purpose of this practicum is to implement and support the BYOD (Bring Your Own Device) initiative according to board policy by encouraging and inviting students to bring personal devices to school to access the curriculum and to build teacher and parent capacity so that implementation is accepted, understood and enduring.

Bring Your Own Device (BYOD) refers to technology models where students bring a personally owned device to school for the purpose of learning. A personally owned device is any technology device brought into the school and owned by a student (or the student's family), staff or guests. [1]

Relationship of the leadership project to the role of the principal

A strong leader exemplifies the following characteristics: knowledge of policy and procedure; the ability to model behaviour that is expected by staff, students and the community; the ability to motivate and inspire others to do their best; the accomplishment of goals that are student centered and the capacity to continue to learn! With these characteristics in mind it is essential for principals to support the BYOD initiative that has been imposed by the Director of Education for the UGDSB. With the policy (BYOD) comes the responsibility of creating school rules and regulations for students and teachers in regards to safe use of technology. Research shows that a classroom that uses technology to modify and redefine learning tasks has increased student engagement. As the principal of the school it is important to keep the students at the heart of the decision making process. Since technology is proven to increase student engagement in the learning process then technology should be a focus for the principal when making decisions about the school community, professional development for staff and guidelines for school rules and regulations. An exemplary principal must be a lifelong learner and great questioner thus keeping up with technology and the release of board accepted programs and initiatives is key to success. The Board Improvement Plan for 2013-2014 states that:

> schools will incorporate technology at the point of instruction to engage students (eg. e-Learning, Blended Learning, UG2GO, hardware-iPad/Apple TV and Smart Technology, BYOD (Bring Your Own Device) [2]

The UGDSB was one of the first school boards to implement google as their platform for all students and staff for word processing and email. It is important that the principal of the school be knowledgeable of google for education.

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[1] Bring Your Own Device: A Guide for Schools. 2012. Alberta Government

[2] http://www.ugdsb.on.ca/documents/Board_Improvement_plan_2011-2014.pdf

Benefits to school staff, student and parents

The benefits of becoming a BYOD school include the availability of technology and the ability to access technology when a teachable moment arises that was not planned for, increased collaboration, differentiated instruction, a greater awareness of digital citizenship and student engagement. Of course, technology alone will not improve learning but when combined with effective facilitation amazing things can happen.

The following YouTube clip (Why BYOD?) addresses the reasons why schools would consider moving towards a policy of BYOD. We all know that the majority of students have access to technology at home that usually supersedes the technology offered at school. Bring your own device allows schools to address the digital divide. Although technology has been at the centre of our board's capital spending it is not reasonable to believe that our school board will be able to provide the latest technology for each and every student. This is where BYOD affects change, it allows for schools to provide for students that really need our help while helping students who have personal access learn how to use those devices to be productive lifelong 21st century learners.

Another benefit to students bringing in their own device is the level of access to technology in the classroom. The reality is that student devices are typically more up to date than what schools can provide as well students tend to take better care of their own possessions. When access increases teachers can begin to embed innovative uses of technology in lesson designs. Students are given more opportunities to engage in inquiry learning; personalize their learning; access libraries of digital content that provide multiple pathways to learning; pursue real world issues and topics of deep interest and explore and construct ideas, opinions, arguments and evidence-based reasoning collaboratively.

As a classroom teacher my number one concern is having an impact on student learning. Many schools will never come close to an ubiquitous technology model without implementing BYOD. When students are engaged in the learning process classroom behaviour improves, the classroom atmosphere improves and student learning is enhanced; overall all parties (students, teachers, parents & administration) are benefiting from the use of technology.

Reference to Relevant Legislation, district school board policies and Literature

21st Century Education

The world has dramatically changed since the 90's when I was in public school however our classrooms look the same. It is time that our classrooms relate to the world around us! The following YouTube clip is a great summary of how our world has changed and a reminder that education must change as well!
http://youtu.be/O35n_tvOK74

Policy 318: Acceptable Use

It is the responsibility of the Upper Grand District School Board to provide inservice for staff on

the use of digital technology and assist in the provision of resources to help staff teach students appropriate use of digital technology. It is the responsibility of the Upper Grand District School Board schools to provide student users with instruction in the proper use of digital technology.

Board Improvement Plan

The board Improvement Plan states that teachers will:

> incorporate the use of assistive technology into daily class work as an essential tool[3]

The school board has purchased Read/Write app for all students to use with their google account. Read/Write has tools for text to speech, dictionary, word prediction and a highlighting tool. The UGDSB is slowly moving towards replacing Kurzweil with Read/Write as the cost benefit ratio is much better for Read/Write.

The board improvement plan also states as a goal for student engagement:

> schools will incorporate technology at the point of instruction to engage students (eg. e-Learning, Blended Learning, UG2GO, hardware-iPad/Apple TV and Smart Technology, BYOD (Bring Your Own Device)[4]

Information Technology Department Multi-Year Objectives

The Information Technology Department with UGDSB has developed a multi-year plan for IT. The plan outlines timeline targets beginning in September 2013 to 2016. The first initiative is the implementation of BYOD. The IT department has outlined one year (from Sept. 2013 to August 2014) for implementation. This initiative will ensure that all schools in the UGDSB are prepared to support the use of personal technology devices in classrooms and schools by staff and students. Mandatory training for a team of teachers and administrators from each school is required to be completed by the end of 2013-2014 school year. The training involves three on-site workshops and the completion of three additional on-line workshops, to learn about Internet safety and classroom management methods to ensure the proper and effective use of personal devices.

The second initiative relates to the expansion and facilitation of the Cloud environment (UGCloud) for word processing and collaborative learning experiences for staff and students. Ongoing training will be provided for all stakeholders to support the effective use of the Cloud environment. IT staff will continue to monitor and maintain access and security requirements for UG staff and track usage of the environment.[5]

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[3] http://www.ugdsb.on.ca/documents/Board_Improvement_plan_2011-2014.pdf
[4] http://www.ugdsb.on.ca/documents/Board_Improvement_plan_2011-2014.pdf
[5] https://www.ugdsb.on.ca/uploadedFiles/staff/it/Documents/I.T.%20Department%20Multi-Year%20Objective.pdf

Learning Enhanced With Technology

Technology allows teachers to make learning environments and experiences richer for students. It is important for the teacher to think critically about how they use technology so that it is not simply used as an accommodation for example to assist with adding, subtracting, multiplying and dividing or as a means to replace old overhead technology. There are so many choices when it comes to technology: tablets, calculators, MP3, laptops, computers, Chromebooks, data projectors, smart boards, interactive white boards etc. When deciding what technology to use ask yourself the following questions:

1. How might this technology enhance what I'm teaching?

2. How might this technology improve the access to information, resources, or thinking strategies for students?

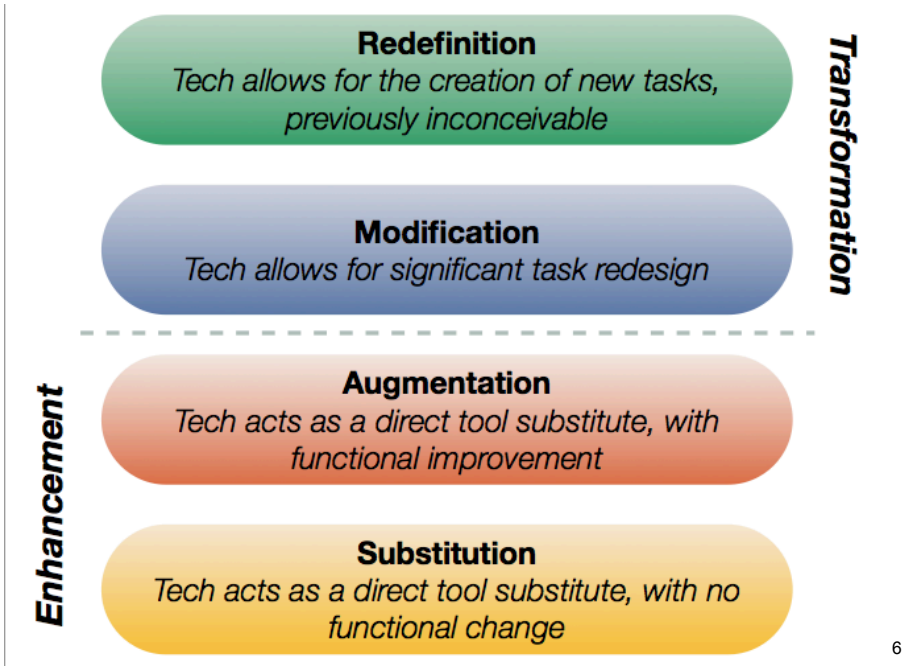
3. What might be amplified in using this technology?
   - Authentic audience?
   - Multimodal approaches that remove barriers for students?
   - Transparency, which may make thinking more visible?
   - Digital records that make progress more visible?
   - How does this technology make assessment more authentic, visible and/or formative for me as a teacher? (UGDSB, Curriculum Department)

The two approaches that help teachers to approach technology integration mindfully are SAMR model and TPACK model. You Tube Video for SAMR model

What is the SAMR model?

The SAMR model is a progressive model of integrating technology into teaching and learning practices that was developed by Dr. Ruben Puentedura, PhD (see diagram below). The four stages (Substitution, Augmentation, Modification, and Redefinition) define the degree in which technology is being used in the classroom by teacher and student. The UGDSB has implemented this model to demonstrate to teachers that as technology becomes woven into the teaching practice student engagement increases. When teachers introduce technology into the classroom it is most likely to be at the substitution phase whereby, technology is being used as a substitution for paper and pencil tasks ie. worksheets and handouts are being developed with word processor. At this level there is no functional change in teaching and learning. As the teacher moves along the continuum, computer technology becomes more important in the classroom but at the same time becomes more invisibly woven into the demands of good

teaching and learning. At the next level, augmentation, computer technology offers an effective tool to perform common tasks. For example, students write a test using google forms instead of paper and pencil. At this stage there is some functional benefits such as the test is saved on the computer and students can receive immediate feedback instead of waiting for the teacher to mark and return the test. Thus students are becoming more engaged in their learning process as they receive immediate feedback on their learning. This level starts to move along the student-centered continuum as opposed to teacher centered in the substitution phase. The plan with BYOD is that student's will have more access to technology that they are comfortable using which will allow for teachers to move along the SAMR phases without being hindered by student access to technology. The third phase is the first step over the line between enhancing the traditional program of the classroom and transforming the classroom. Common classroom tasks are being accomplished through the use of computer technology. There is significant functional change in the classroom. An example of this is using the commenting service in Google Docs, for instance, to collaborate and share feedback on a given task task. The last phase is Redefinition. The classroom is transformed and learning that was previously inconceivable results in ultimate student engagement for example using skype to talk to a classroom on another continent to compare school life. If you are to place this level in Blooms revised taxonomy pyramid, it would probably correspond to synthesis and evaluation as being the highest order thinking skills.



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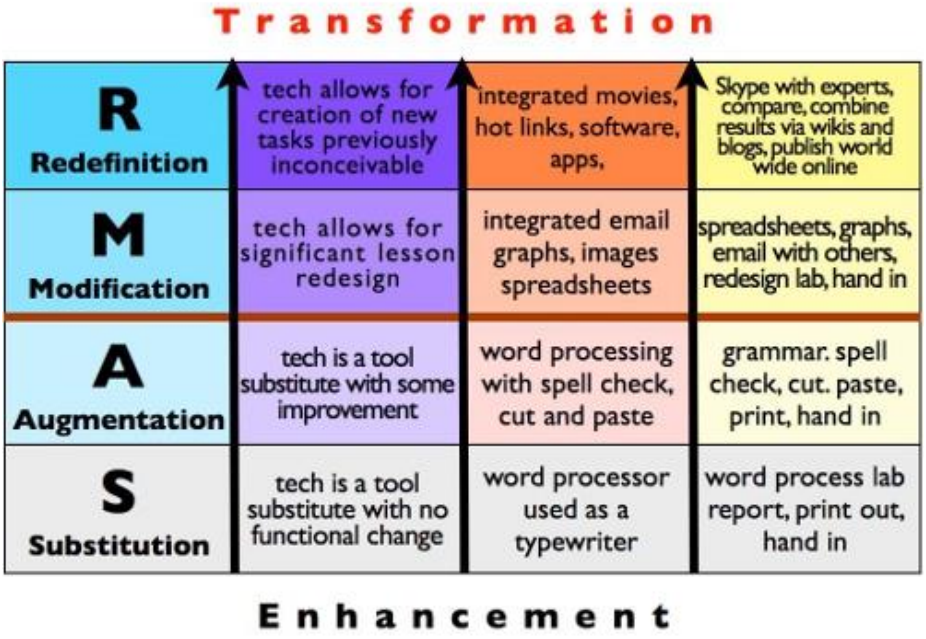
[6] <http://jennyluca.wikispaces.com/file/view/SAMR_model.png/203923578/SAMR_model.png>



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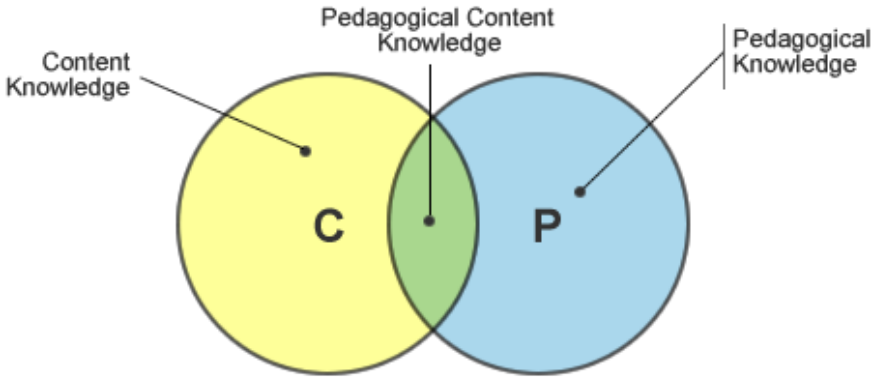
What is the TPACK model?

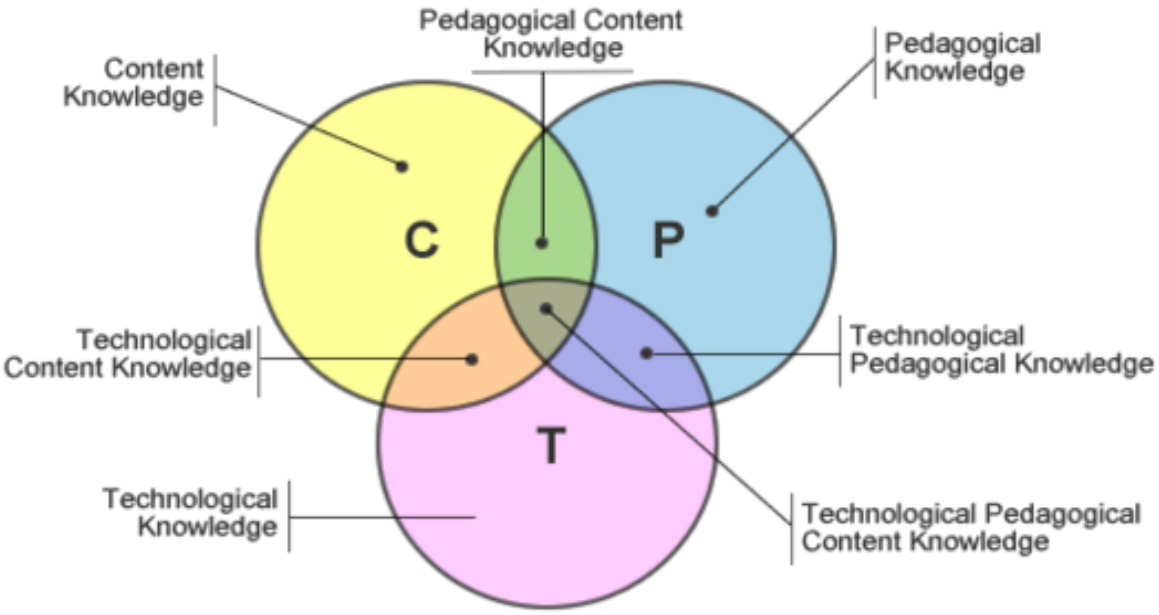
The TPACK model is a framework that identifies the knowledge teachers need to teach effectively with technology. It is the extension of Shulman's claim to fame: Pedagogical Content Knowledge (PCK).



Shulman believed that the content knowledge referred to "what" to teach and the pedagogical knowledge referred to "how" to teach. It is the amalgamation of both content and pedagogical knowledge that makes for best teaching practices and student learning. The introduction of technology adds a third dimension to Shulman's Venn Diagram. Technological Pedgagocial

[7] <https://www.principals.org/Content/158/SAMR2.jpg>

Content Knowledge is the basis of effective teaching with technology, it is the understanding of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face.[8]



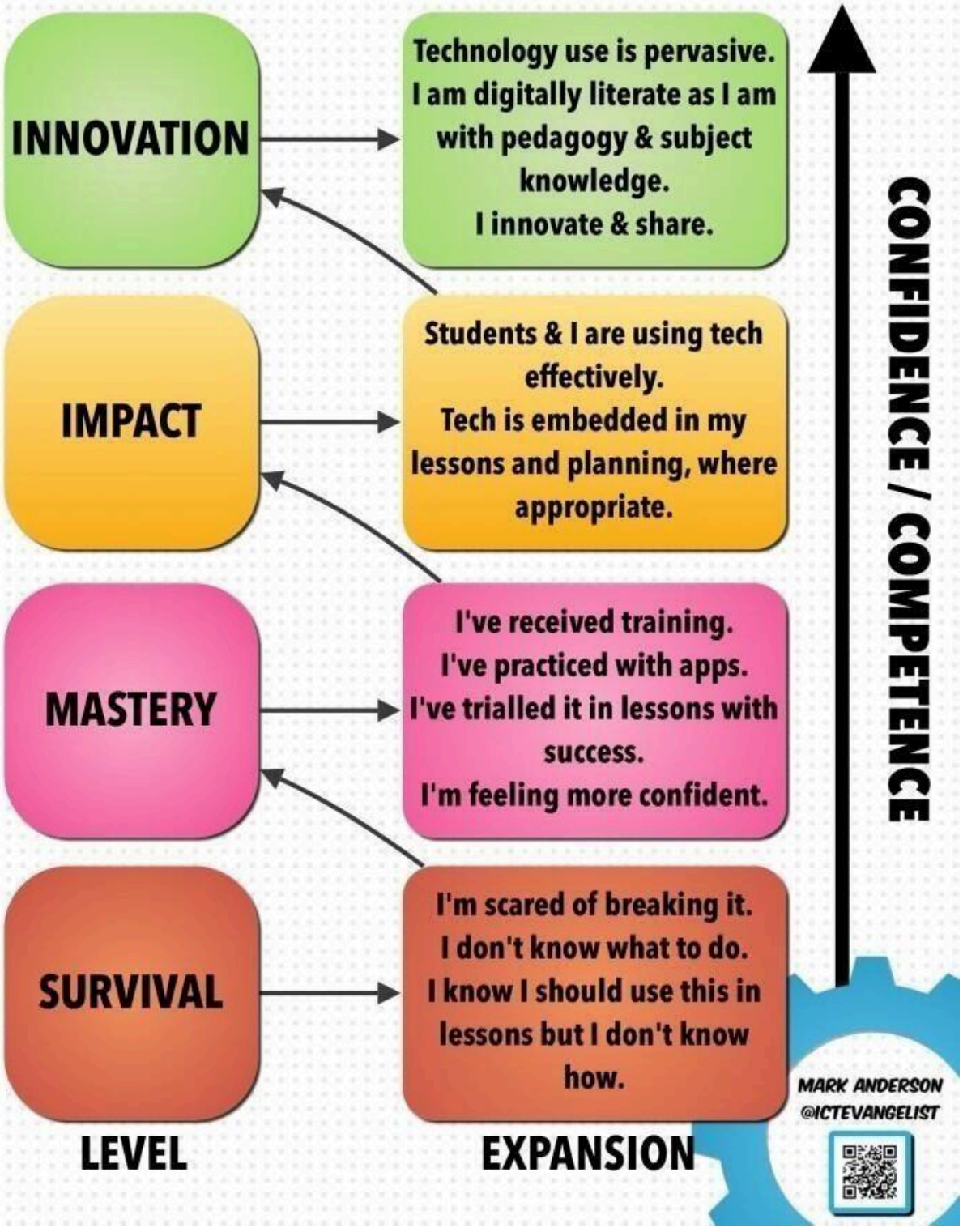
[9]

[8] http://www.tpack.org/
[9] <http://deangroom.files.wordpress.com/2010/07/gw550h306.png>

Teacher confidence in use of technology

based upon the work of Mandinach and Cline

(Classroom Dynamics: Implementing a Technology-Based Learning Environment)



Evidence of Effective Leadership

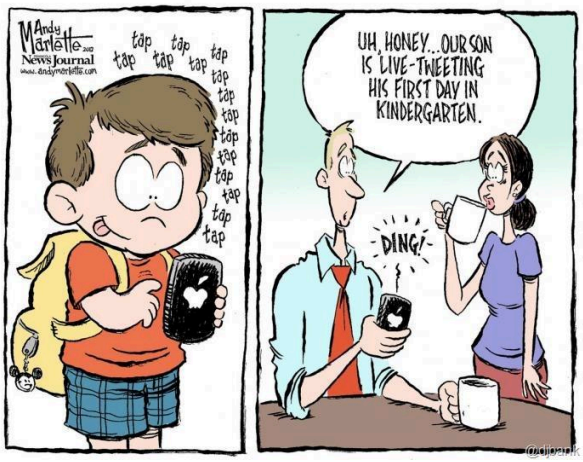
In order for change to occur all parties need to be invested and informed of the changes. I began my journey by acquiring professional knowledge in regards to the boards implementation plan for BYOD. The UGDSB offered all schools the opportunity to send staff to participate in a series of workshops. Each session addressing a critical issue related to BYOD. I assembled a team of staff members which included two teachers from the junior division, one teacher from primary, myself and the French teacher. After attending the sessions and collaborating with team members I modelled acceptable use of technology in the classroom and welcomed teachers into my learning process by sharing the ups and downs of my lessons. I hosted two workshops for teachers to attend to facilitate teacher learning of google docs and google forms. Finally, I planned a parent information night to illicit the support of parents in the advancement of technology into our classrooms. The staff and parents at Eramosa School know that I am available to answer their questions and help solve problems they encounter with regards to technology.

The night of the presentation - Wednesday January 22, 2014 went very well. We had 13 parents come out to the event which represents 10% of the school population. The parents represented all grades at the school including parents with children in Kindergarten to Grade 6.

Prior to that night I had included an excerpt in the December newsletter as well my principal had discussed the workshop at parent council meetings. An invitation was sent home a week prior to the event with a link to a survey online for parents to fill out and an RSVP slip. Free babysitting and snacks were provided. I received 12 RSVP slips and out of that only one parent was unable to make it. I believe that the turnout although small was relative to other events held in the school. I am hoping that word will spread through the community as the chair of parent council was at the presentation. I received positive feedback from the parents and interest to learn more. I have suggested a follow-up presentation that would focus on parents and their child working on a computer to explore the programs together and/or for the students to share their learning and knowledge of programs used in the classroom. A leader continues to learn, inspire and engage students in learning. I would like to continue to involve parents in this process through hands-on interactive workshops. For my own professional learning I have plans to attend the Google Summit in Kitchener hosted by ECOO.

Excerpt written for December's school newsletter:

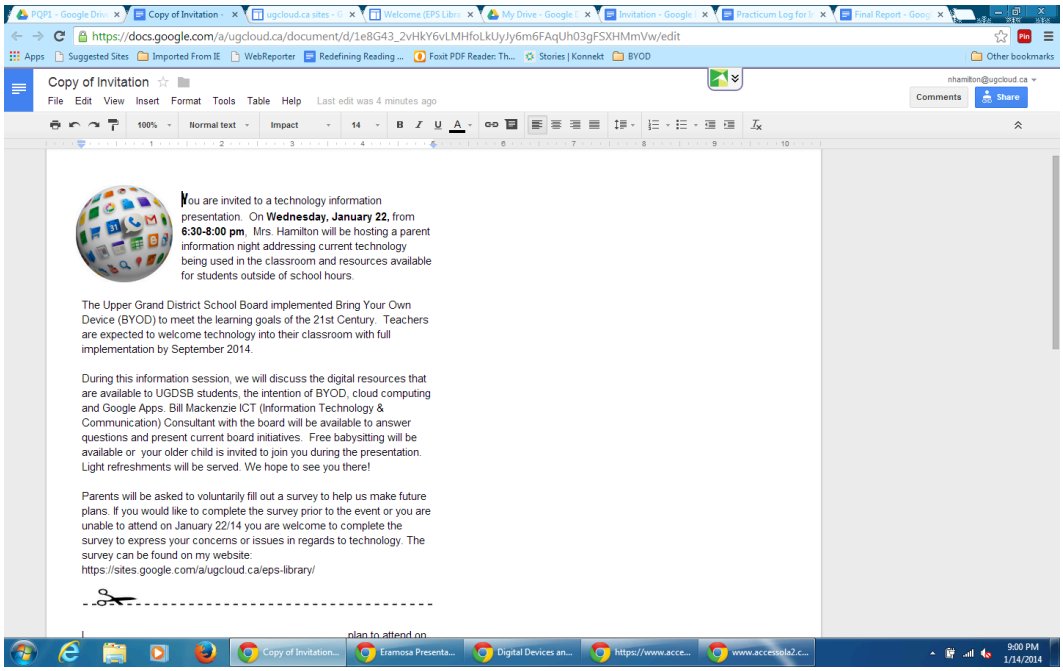
Is your child(ren) using their UGCloud account at home? Did you know that all students are given an email address and access to UGCloud beginning in JK. If you are interested in learning about the technology we are using at Eramosa and what it has to offer for 21st century learners join me on January 22, 2014. That night we will have a special guest from the board Bill Mackenzie, Information Technology & Communications Support Teacher to answer your questions regarding the board initiative to bring technology into the classroom.



Invitation sent out to parents in January:

Click on the hyperlink below to see the invitation in a full screen

Invitation for Parents



Survey to Collect Information Prior to Presentation:

The survey was also set up for parents to complete when they arrived at the school.

Click on link to see survey

Slideshow used on Jan. 22 with Parents:

Click on link to see slideshow

Handout for Parents:

Click on link to see pamphlet given to parents

Feedback Form:

Click on link to see feedback form sent home to parents that attended

Links to improving teaching and learning

Google Drive: A Better Method for Giving Students Feedback
http://plpnetwork.com/2013/09/09/give-students-frequent-feedback-google-drive/

Sources and Collection of Data

Alvy, Harvey and Pam Robbins. (2005). Growing into Leadership, Supporting New Educators.62(8), p50-54.

Bring Your Own Device: A Guide for Schools. 2012. Alberta Government.

Information Technology 2014-2017 Strategic Plan. Upper Grand District School Board. **https://www.ugdsb.on.ca/uploadedFiles/staff/it/Documents/IT%20Strategic%20Plan%20Brochure.pdf**

Koehler, Matthew. What is TPACK. (2011). TPACK. http://www.tpack.org/

Our Approach to BYOD. (Jan. 15, 2014). Blog http://learningconnections.wordpress.com/2014/01/15/our-approach-to-byod/

Upper Grand District School Board. Board Improvement Plan 2013-2014. http://www.ugdsb.on.ca/documents/Board_Improvement_plan_2011-2014.pdf